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ABSTRACT OF THE DISCLOSURE

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A method of forming a metal product. A metal alloy workpiece substrate is provided

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have pre-process dimensions. The dimensional differences are determined between the

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pre-process dimensions of the workpiece substrate and desired post-process dimensions

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of a post-process metal product formed from the workpiece substrate. A build-up

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thickness is determined of coating material required to obtain the desired post-process

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dimensions of the post-process metal product. A high-density coating process is

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performed to coat the workpiece substrate with a coating material to build-up a thickness

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of coating material effective to obtain desired finished dimensions after performing a

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sintering heat treatment process and/or a hot isostatic pressing treatment. The sintering

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heat treatment is performed on the coated workpiece substrate to densify the coating

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material. Then, the hot isostatic pressing treatment is performed to obtain the post-

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process metal product having the desired post-process dimensions and having diffusion

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bonding between the coating material and the workpiece substrate.